



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,430	01/28/2004	Brian L. Gibson	H0003690	3601
7590	04/24/2007		EXAMINER	
Scott Jacobson, Esquire Honeywell International, Inc. 101 Columbia Road P.O. Box 2245 Morristown, NJ 07962-2245			CHEUNG, WILLIAM K	
			ART UNIT	PAPER NUMBER
			1713	
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	04/24/2007	PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/766,430	GIBSON ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	William K. Cheung	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 13 February 2007.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-18, 67 and 71-85 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-18, 67, 71-85 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

1. Claims 1-18, 67, 71-85 are pending.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-18, 67 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaneko et al. (US 3,635,856) as affirmed by product literature of Mitsubishi-Kagaku Food Corporation, copyright 2002 (c) obtained from website <http://www.mfc.co.jp/english/index.htm>, for the reasons adequately set forth from paragraph 4 of the office action of August 11, 2006.

4. Claims 71-75 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaneko et al. (US 3,635,856) as affirmed by product literature of Mitsubishi-Kagaku Food Corporation, copyright 2002 (c) obtained from website

<http://www.mfc.co.jp/english/index.htm> for the reasons adequately set forth from paragraph 5 of the office action of August 11, 2006.

5. Claims 76-85 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaneko et al. (US 3,635,856) as affirmed by product literature of Mitsubishi-Kagaku Food Corporation, copyright 2002 (c) obtained from website <http://www.mfc.co.jp/english/index.htm> for the reasons adequately set forth from paragraph 6 of the office action of August 11, 2006.

***Response to Arguments***

6. Applicant's arguments filed February 13, 2007 and affidavits filed January 10, 2007 have been fully considered but they are not persuasive. Applicants continue to argue that Kaneko et al. only disclose a mixture of "sucrose alkyl esters" and do not disclose an octa-ester of the disclosed "sucrose alkyl esters". Applicants' argument filed in the affidavits of January 10, 2007, generally starts with the wrong assumption that Kaneko et al. only disclose a mixture of "sucrose alkyl esters", and does not provide any evidence that the teachings of Kaneko et al. do not embrace a mixture of "sucrose alkyl esters".

Regarding applicants' argument that the recited "sucrose alkyl ester" of Kaneko et al. is a broad disclosure of the broad genus of saccharide esters, applicants fail to

Art Unit: 1713

recognize that the recited "sucrose" of Kaneko et al. is a "di-saccharide", which is a species within the genus of "saccharide esters". Applicants must also recognize that the formula I of claim 1 is a "di-saccharide" or "sucrose" which is listed under the claimed genus "saccharide ester" (claim 1, line 4-14).

Regarding applicants' argument that the recited "sucrose alkyl esters" ... include mono-esters or diesters of fatty acids, applicants fail to recognize that "sucrose" is a di-saccharide, not a fatty acid. **Applicants must recognize that a fatty acid is a carboxylic acid often with a long unbranched aliphatic tail (chain), which is either saturated or unsaturated.**

Examples of Saturated fatty acids:

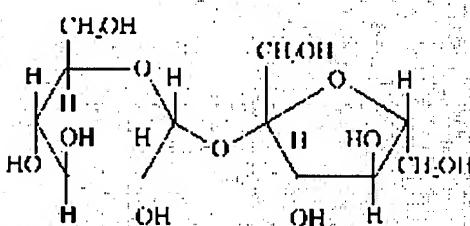
<u>Butyric</u>	(butanoic acid):	$\text{CH}_3(\text{CH}_2)_2\text{COOH}$	<u>C4:0</u>
<u>Caproic</u>	(hexanoic acid):	$\text{CH}_3(\text{CH}_2)_4\text{COOH}$	<u>C6:0</u>
<u>Caprylic</u>	(octanoic acid):	$\text{CH}_3(\text{CH}_2)_6\text{COOH}$	<u>C8:0</u>
<u>Capric</u>	(decanoic acid):	$\text{CH}_3(\text{CH}_2)_8\text{COOH}$	<u>C10:0</u>
<u>Lauric</u>	(dodecanoic acid):	$\text{CH}_3(\text{CH}_2)_{10}\text{COOH}$	<u>C12:0</u>
<u>Myristic</u>	(tetradecanoic acid):	$\text{CH}_3(\text{CH}_2)_{12}\text{COOH}$	<u>C14:0</u>
<u>Palmitic</u>	(hexadecanoic acid):	$\text{CH}_3(\text{CH}_2)_{14}\text{COOH}$	<u>C16:0</u>
<u>Stearic</u>	(octadecanoic acid):	$\text{CH}_3(\text{CH}_2)_{16}\text{COOH}$	<u>C18:0</u>
<u>Arachidic</u>	(icosanoic acid):	$\text{CH}_3(\text{CH}_2)_{18}\text{COOH}$	<u>C20:0</u>
<u>Behenic</u>	(docosanoic acid):	$\text{CH}_3(\text{CH}_2)_{20}\text{COOH}$	<u>C22:0</u>

Art Unit: 1713

## Examples of unsaturated fatty acids:

<u>Myristoleic acid:</u>	$\text{CH}_3(\text{CH}_2)_3\text{CH}=\text{CH}(\text{CH}_2)_7\text{COOH}$	C14:1
<u>Palmitoleic acid:</u>	$\text{CH}_3(\text{CH}_2)_5\text{CH}=\text{CH}(\text{CH}_2)_7\text{COOH}$	C16:1
<u>Oleic acid:</u>	$\text{CH}_3(\text{CH}_2)_7\text{CH}=\text{CH}(\text{CH}_2)_7\text{COOH}$ or <i>cis</i> -Δ <sup>9</sup>	C18:1
<u>Linoleic acid:</u>	$\text{CH}_3(\text{CH}_2)_4\text{CH}=\text{CHCH}_2\text{CH}=\text{CH}(\text{CH}_2)_7\text{COOH}$	C18:2
<u>Alpha-linolenic acid:</u>	$\text{CH}_3\text{CH}_2\text{CH}=\text{CHCH}_2\text{CH}=\text{CHCH}_2\text{CH}=\text{CH}(\text{CH}_2)_7\text{COOH}$	C18:3
<u>Arachidonic acid</u>	$\text{CH}_3(\text{CH}_2)_4\text{CH}=\text{CHCH}_2\text{CH}=\text{CHCH}_2\text{CH}=\text{CHCH}_2\text{CH}=\text{CH}(\text{CH}_2)_3\text{COOH}$	NIST C20:4
<u>Eicosapentaenoic acid</u>		C20:5
<u>Erucic acid:</u>	$\text{CH}_3(\text{CH}_2)_7\text{CH}=\text{CH}(\text{CH}_2)_{11}\text{COOH}$	C22:1
<u>Docosahexaenoic acid</u>		C22:6

## An example of disaccharide:



Sucrose, a common disaccharide

Nevertheless, Kaneko et al. clearly teach the incorporation of sucrose alkyl esters, which generically include each and individually of the eight species of sucrose alkyl esters having different number of ester groups (mono-, di-, tri-, tetra-, penta-, hexa-, penta-, octa- sucrose alkyl esters). Since Kaneko et al. are silent on "a mixture" of sucrose alkyl esters or "a partially esterified" sucrose ester, the examiner has a reasonable basis to interpret the recited "sucrose alkyl esters" to mean "a sucrose alkyl

ester" that has been fully esterified (100 wt% octa-substituted). The use of the product literature of Mitsubishi-Kagaku Food Corporation is merely to affirm the backbone structure of the claimed "sucrose structure" of the Formula I of claim 1. In view of the reasons set forth above, the rejection of claims 1-18, 67, 71-85 set forth in the office action of August 11, 2006 is proper.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1713

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K. Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William K. Cheung, Ph. D.

Primary Examiner

April 19, 2007

WILLIAM K. CHEUNG  
PRIMARY EXAMINER